**Fig. 1**

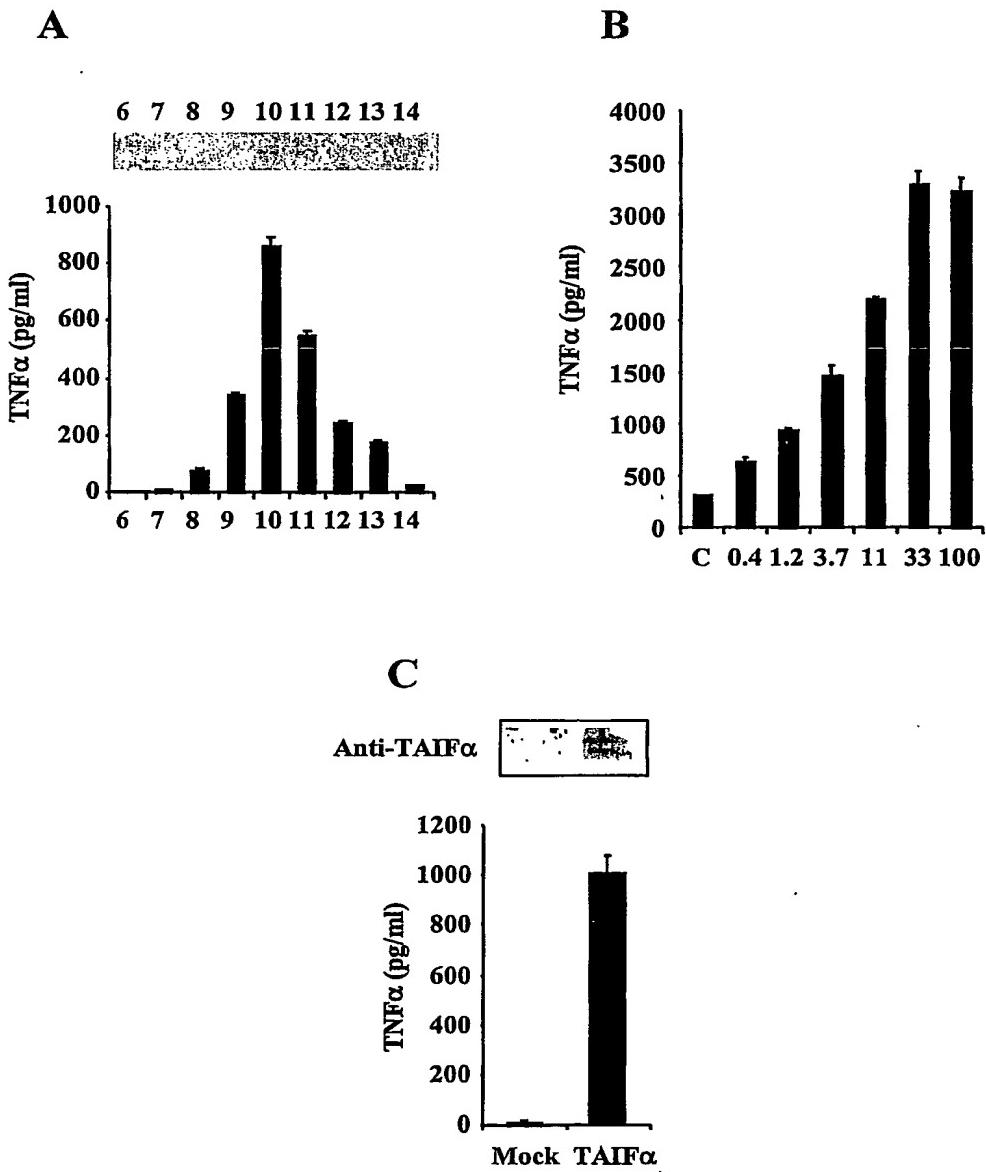


Fig. 2

IL-32 α	ATGTGCTTCCCGAAGGTCTCTGATGACATGAAGAAGCTGAAGGCCGAATG-----
IL-32 β	ATGTGCTTCCCGAAGGTCTCTGATGACATGAAGAAGCTGAAGGCCGAATG-----
IL-32 γ	ATGTGCTTCCCGAAGGTCTCTGATGACATGAAGAAGCTGAAGGCCGAATGTAATG-----
IL-32 δ	-----ATGAAGAAGCTGAAGGCCGAATG-----
IL-32 α	-----
IL-32 β	-----
IL-32 γ	CTCCTCCCTACTTCTGCTCAGGGTTGGGGCTGGTCTCAGCGTGTGACACTGAGGAC
IL-32 δ	-----
IL-32 α	-----
IL-32 β	-----
IL-32 γ	ACTGTGGACACCTGGACCCTGGAGGGACAAGGATCCGGCCCTTGTTGGTGCCTGCAACTCTGC
IL-32 δ	-----
IL-32 α	-----CACCAAGGCTATAGAAAGATTATGATAAAATGCAAAATGCAGAATCA
IL-32 β	-----CACCAAGGCCATAGAAAGATTATGATAAAATGCAAAATGCAGAATCA
IL-32 γ	CTCTCTTCACAGCACCAGGCCATAGAAAGATTATGATAAAATGCAAAATGCAGAATCA
IL-32 δ	-----CACCAAGGCCATAGAAAGATTATGATAAAATGCAAAATGCAGAATCA
IL-32 α	GGACGTGGACAGGTGATGTCGAGCCTGGCAGAGCTGGAGGACGACTTCAAAGAGGGCTAC
IL-32 β	GGACGTGGACAGGTGATGTCGAGCCTGGCAGAGCTGGAGGACGACTTCAAAGAGGGCTAC
IL-32 γ	GGACGTGGACAGGTGATGTCGAGCCTGGCAGAGCTGGAGGACGACTTCAAAGAGGGCTAC
IL-32 δ	GGACGTGGACAGGTGATGTCGAGCCTGGCAGAGCTGGAGGACGACTTCAAAGAGGGCTAC
IL-32 α	CTGGAGACAGTGGCGCTTATTATGAGGGAGCAGCACCCAGAGCTCACTCCTCTACTTGAA
IL-32 β	CTGGAGACAGTGGCGCTTATTATGAGGGAGCAGCACCCAGAGCTCACTCCTCTACTTGAA
IL-32 γ	CTGGAGACAGTGGCGCTTATTATGAGGGAGCAGCACCCAGAGCTCACTCCTCTACTTGAA
IL-32 δ	CTGGAGACAGTGGCGCTTATTATGAGGGAGCAGCACCCAGAGCTCACTCCTCTACTTGAA

Fig. 3A

IL-32 α	AAAGAAAGAGATGGATTACGGTGCCGAGGCAACAGATCCCGATGTTGAGGAT
IL-32 β	AAAGAAAGAGATGGATTACGGTGCCGAGGCAACAGATCCCGATGTTGAGGAT
IL-32 γ	AAAGAAAGAGATGGATTACGGTGCCGAGGCAACAGATCCCGATGTTGAGGAT
IL-32 δ	AAAGAAAGAGATGGATTACGGTGCCGAGGCAACAGATCCCGATGTTGAGGAT
IL-32 α	CCCGCAACCGAGGAGCCTGGGGAGAGCTTTGTGACAAGG-----
IL-32 β	CCCGCAACCGAGGAGCCTGGGGAGAGCTTTGTGACAAGGTCA-----
IL-32 γ	CCCGCAACCGAGGAGCCTGGGGAGAGCTTTGTGACAAGGTCA-----
IL-32 δ	CCCGCAACCGAGGAGCCTGGGGAGAGCTTTGTGACAAGGTCA-----
IL-32 α	-----
IL-32 β	ATGCTGCAGCGGCTGCAGACCTGGCACGGGTTCTGGCCTGGGTGAAGGAGAAGGTG
IL-32 γ	ATGCTGCAGCGGCTGCAGACCTGGCACGGGTTCTGGCCTGGGTGAAGGAGAAGGTG
IL-32 δ	ATGCTGCAGCGGCTGCAGACCTGGCACGGGTTCTGGCCTGGGTGAAGGAGAAGGTG
IL-32 α	-----
IL-32 β	GTGGCCCTGGTCCATGCAGTCAGGCCTCTGGAAACAGTTCCAGAGTTCTGCTCT
IL-32 γ	GTGGCCCTGGTCCATGCAGTCAGGCCTCTGGAAACAGTTCCAGAGTTCTGCTCT
IL-32 δ	GTGGCCCTGGTCCATGCAGTCAGGCCTCTGGAAACAGTTCCAGAGTTCTGCTCT
IL-32 α	-----
IL-32 β	TCCTACGGAGCCCCACGGGGGGACAAGGAG
IL-32 γ	CTGTCAGAGCTTTCATGTCCCTTTCCAGTCCTACGGAGCCCCACGGGGGGACAAGGAG
IL-32 δ	CTGTCAGAGCTTTCATGTCCCTTTCCAGTCCTACGGAGCCCCACGGGGGGACAAGGAG
IL-32 α	GAGCTGACACCCCAGAAGTGTCTGAACCCCAATCCTAAAATGA
IL-32 β	GAGCTGACACCCCAGAAGTGTCTGAACCCCAATCCTAAAATGA
IL-32 γ	GAGCTGACACCCCAGAAGTGTCTGAACCCCAATCCTAAAATGA
IL-32 δ	GAGCTGACACCCCAGAAGTGTCTGAACCCCAATCCTAAAATGA

Fig. 3B

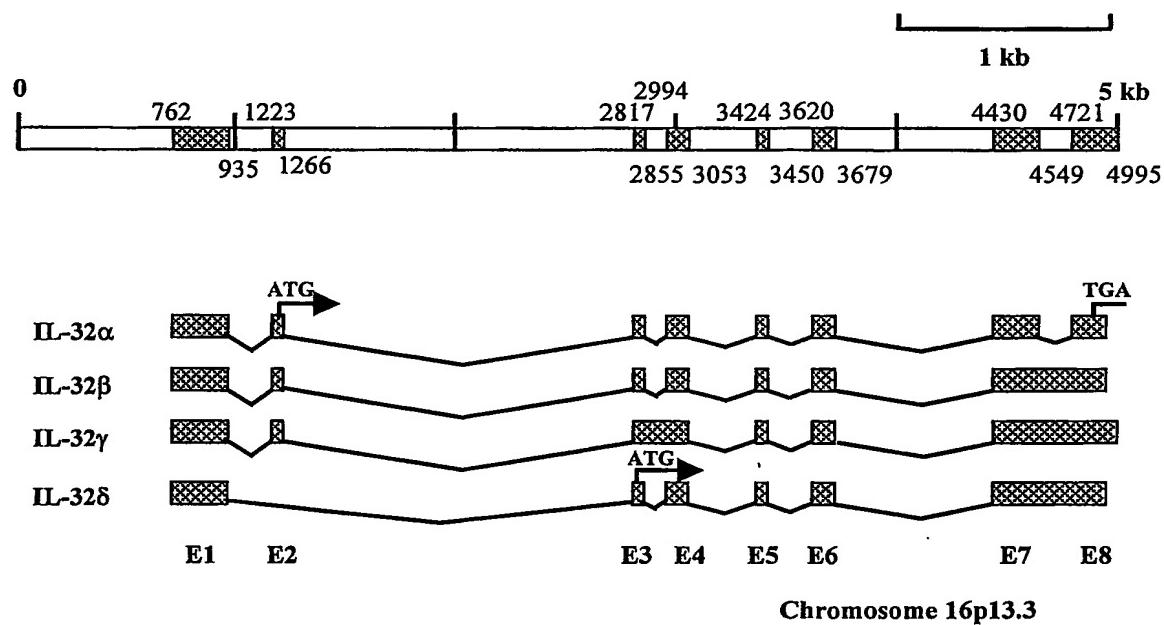
A

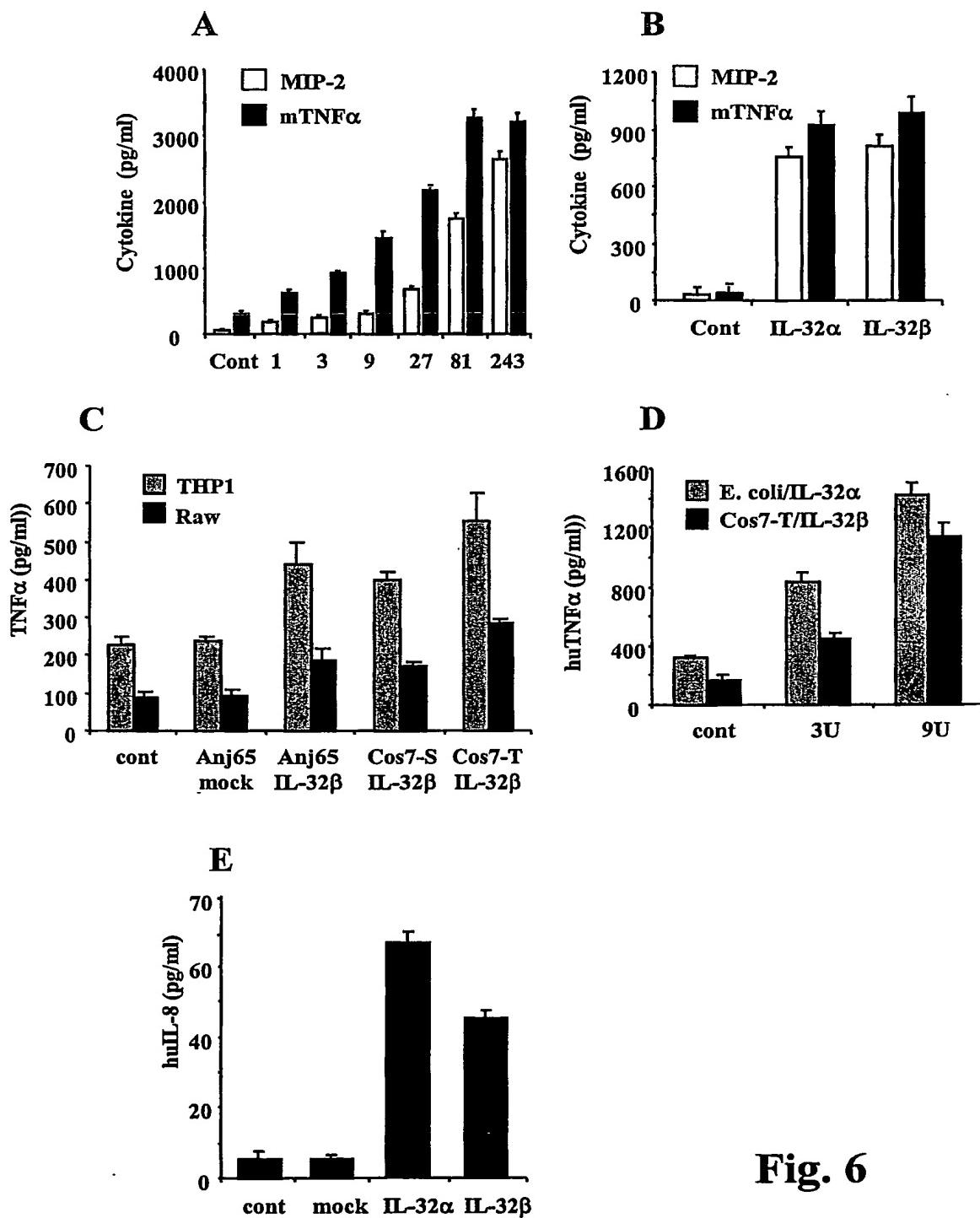
	1	Myr
IL-32 α	MCFPKVLSDDMKKLKARM-----	
IL-32 β	MCFPKVLSDDMKKLKARM-----	
IL-32 γ	MCFPKVLSDDMKKLKARMVMLLPTSAQGLGAWVSACDTEDTVGHLGPWRDKDPALWCQLC	
IL-32 δ	-----MKKLKARM-----	
	61	Myr
IL-32 α	----HQAIERFYDKMQNAESGRGQVMSSLAELEDDFKEGYLETVAAYYEEQHPELTPILLE	
IL-32 β	----HQAIERFYDKMQNAESGRGQVMSSLAELEDDFKEGYLETVAAYYEEQHPELTPILLE	
IL-32 γ	LSSQHQAIERFYDKMQNAESGRGQVMSSLAELEDDFKEGYLETVAAYYEEQHPELTPILLE	
IL-32 δ	----HQAIERFYDKMQNAESGRGQVMSSLAELEDDFKEGYLETVAAYYEEQHPELTPILLE	
	121	Gly
IL-32 α	KERDGLRCRGNRSPVPDVEDPATEEPGESFCDK-----	
IL-32 β	KERDGLRCRGNRSPVPDVEDPATEEPGESFCDKVMRWFQAMLQRLQTWWHGVLAWVKEKV	
IL-32 γ	KERDGLRCRGNRSPVPDVEDPATEEPGESFCDKVMRWFQAMLQRLQTWWHGVLAWVKEKV	
IL-32 δ	KERDGLRCRGNRSPVPDVEDPATEEPGESFCDKVMRWFQAMLQRLQTWWHGVLAWVKEKV	
	181	Myr
IL-32 α	-----SYGAPRGDKEELTPQKCSEPOSSK	
IL-32 β	VALVHAVQALWKQFQSFCCSLSLFMSSFQSYGAPRGDKEELTPQKCSEPOSSK	
IL-32 γ	VALVHAVQALWKQFQSFCCSLSLFMSSFQSYGAPRGDKEELTPQKCSEPOSSK	
IL-32 δ	VALVHAVQALWKQFQSFCCSLSLFMSSFQSYGAPRGDKEELTPQKCSEPOSSK	

B

	1	
huIL-32 β	MCFPKVLSDDMKKLKARMHQAIERFYDKMQNAESGRGQVMSSLAELEDDFKEGYLETVAA	
EqIL-32	MGYPKTSREDNERWKIRFHSTLDRWLDDIEVQSQGEEQVDLGLLEDLEEKFSENILDAVEE	
BoIL-32	MCFAKGVPYDQASLRSIMHKRVDDFCDFKGNEPE-EAQMEAALDETEEGLSEDICEFIED	
Consensus	*-----*-----*-----*-----*-----*	
	61	
huIL-32 β	YYEEQHPELTPPLEKERDGLRCRGNRSPV----PDVEDP----ATE--EPGESFCDFKVMR	
EqIL-32	HHQKNNSESAPLLPDVKPRLRRRAQKSSVLNPEPEPGPILQVEALEAPEPEESFWVRAWR	
BoIL-32	HIQENLPES--LQESSPL-LQEARQGVRRIQRPSV----SARLEVQNPEESI----WA	
Consensus	-----*-----*-----*-----*-----*-----*-----*-----*-----*	
	121	
huIL-32 β	WFQAMLQR-L-QTWWHGVLAWVKEVVA-----LVHAVQALWKQFQS---FCCSLSELF	
EqIL-32	SMGMLQR-LKQRWQAVLA-WVREKVAAGWQA--LCSVAQSINSVLES---FCSYMAGLF	
BoIL-32	RALGRFQVIL-QSLQQRC--WDALTWLREKAVTFLEAICSVVKAVLGVLDFCSSVGQLF	
Consensus	-----*-----*-----*-----*-----*-----*-----*-----*-----**	
	181	
huIL-32 β	MSSF---QSYGAPRGDKEELTPQKCSEPOSSK	
EqIL-32	RYH---IQV-----	
BoIL-32	---GNLIQV-----	
Consensus	-----*	

Fig. 4

**Fig. 5**

**Fig. 6**

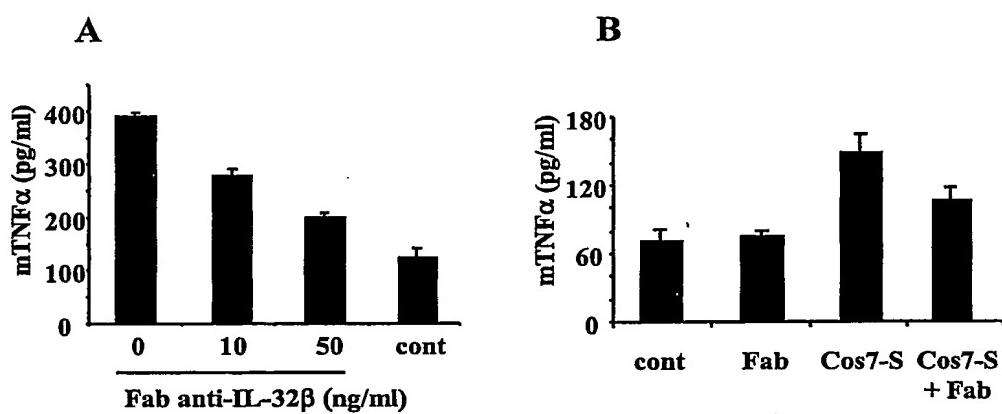


Fig. 7

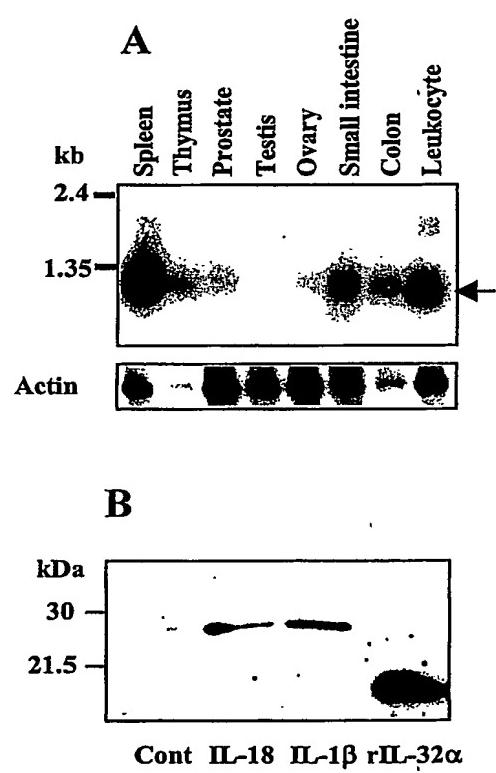
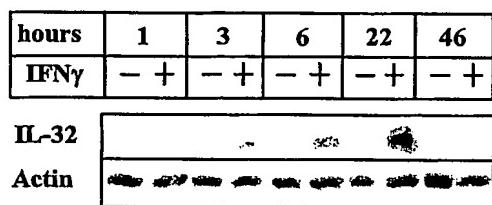
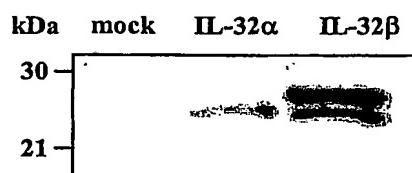
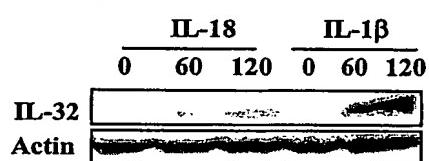
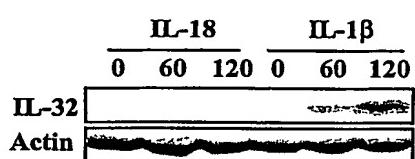
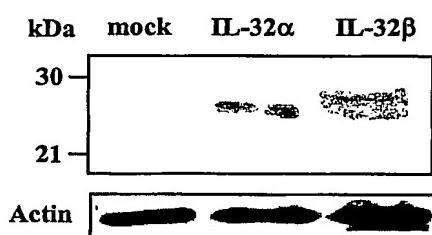
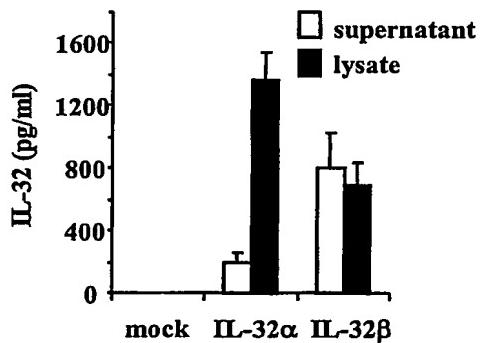
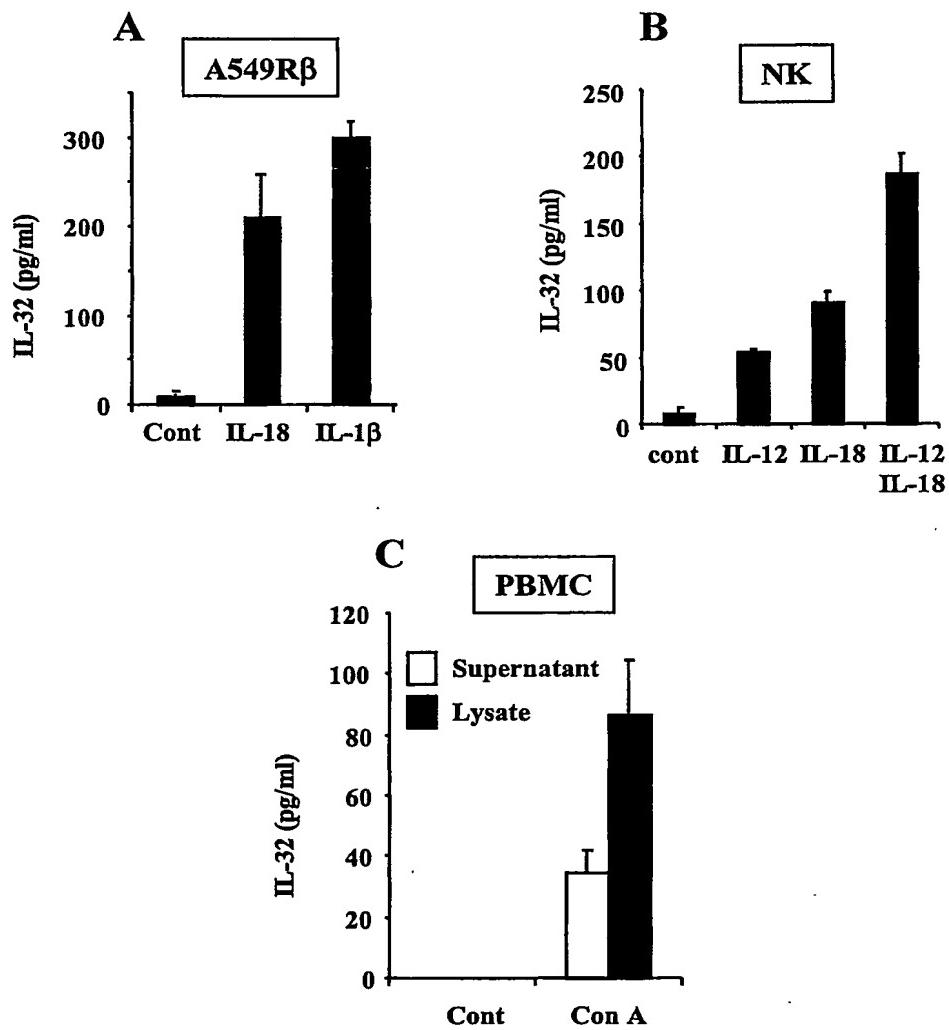


Fig. 8

A**D****B****C****E****F****Fig. 9**

**Fig. 10**

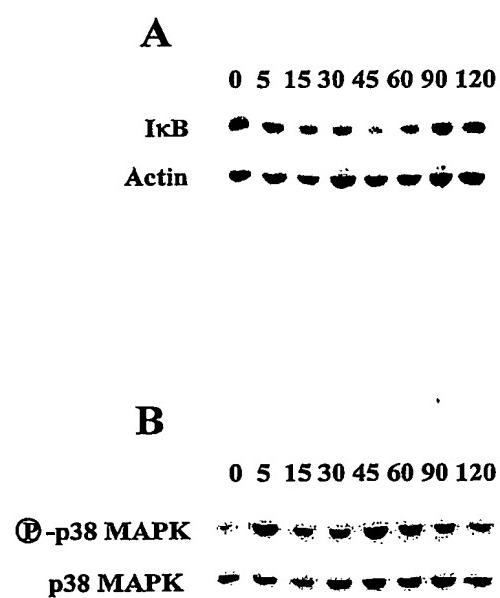


Fig. 11

A**EqIL-32 alpha (SEQ ID NO:18)**

MGYPKTSREDNERWKIRFHSTLDRWLDDIEVQSQEEQVCQCAPTPCSRNLGGRVVTMTMRRKNVPPQVD
LGPLTSPFSQRTFRSDLCHLPTLDSLTSLLCTAWPPCPCSTCSGFLLQV

B**EqIL-32 alpha (SEQ ID NO:19)**

GCACGAGCTCGTCCGTGTGCTGAGAGGCCCTGGGCAGGCACAGCCCCTGGAATCCTGAGCTGCCATG
GGCTACCCCAAGACGCCAGAGAACAGACAATGAACGTTGGAAGATCCGATTTACAGCACTTAGACCGGT
GGCTTGATGATATCGAAGTTCAATCCAAGGAGAGAACAGGTGTGTCAGTGTGCTCCACGCCCTGCTC
CCGTAACCTCGGGGGTCGGGTGGTCACCGATGACGATGAGGAGGAAGAACGTGCCACCTCAGGTGATTTA
GGCCCTTGTACGTCCCCCTTTCACAGAGAACCTTCAGAAGTGACCTTGCCACCTGCCCTACCCCTGACC
TGTCCCTGACCACCTCCCTCACCTCCTGCTGTGCACAGCCTGGCACCCCTGCCACCATGCACTCCTG
CTCAGGTTCTCTGCAGGTCTGACTTGTGGCTCCAGCGCATATGCTTAATAAGTTGT

C**EqIL-32 beta (SEQ ID NO:16)**

MGYPKTSREDNERWKIRFHSTLDRWLDDIEVQSQEEQV р DLGEDLEEKFSENILDАVEHHHQKNNSESA
PLL DV K P RL R R A Q K S S V L N P E P E G P G I L Q V E A L E A P E P E E S F W V R A W R S F M G M L Q R L K Q R W Q A V L A W V
REKVAAGWQALCSVAQSINSVLESFCSYMAGLFRYHIQV

D**EqIL-32 beta (SEQ ID NO:20)**

CTGAGAGGCCCTGGGCAGGCACAGCCCCTGGAATCCTGAGCTGCCATGGCTACCCCAAGACGTCCAG
AGAAAGACAATGAACGTTGGAAGATCCGATTTACAGCACTTAGACCGGTGGCTGATGATATCGAAGTT
CAATCCAAGGAGAGGAACAGGTCGATTAGGCCTAGAACGACTGGAGGAAAATTCACTGAAACATT
TTGACGCCGTGGAGGAGCACCACAGAACAAACTCAGAATCTGCCCTTACTTCCTGACGTGAAGCC
CAGGTTACGTCGAGAGCTCAGAACGTCCTCTGCTCAACCCCTGAACCTGAGGGTCCAGGGATCCTGCAA
GTTGAGGCTCTAGAGGCACCCGAGCCTGAAGAAAGCTTTGGGTCAAGAGCATGGAGGTCGTTATGGGA
TGCTACAGCGACTGAAGCAGAGGTGGCAGGCTGTACTGGCCTGGGTGCAGAGAACGGTGGCTGCTGGCTG
GCAGGCCCTATGCAGTGTGGCCAGTCATTAAATAGTGTGCTTGAGAGTTCTGCTCCTATATGGCTGG
TTGTTTAGGTACCACATCCAGGTCTAGGGGCCCATGGGTCCAGGAGGGTAGCCACACCTGCAGCC
CTTGACGTCCCCCTTTCACAGAGAACCTTCAGAACGTTGACCTTGCCACCTGCCCTACCCCTGACCTGTC
CTTGACCACTCCCTCACCTCCTGCTGTGCACAGCCTGGCCACCCCTGCCACCATGCACTCCTGCTCA
GGTTCCCTCTGCAGGTCTGACTTGTGGCTCCAGCGCATAGTCTT

Fig. 12

A**BoIL-32 beta (SEQ ID NO:17)**

MCFAKGVPYDQASLRSIMHKRVDDFCDKMGNEPEEAQMEAALDETEEGLSEDICEFIEDHIQENLPESLQ
ESSPLLQEARGVRRRIQRPSVSARLEVQNPEESIWARALGRFQVILOSLQQRCWDALTWLREKAVTFLE
AICSVVKAVLGVLTDFFCSSVGQLFGNLIQV

B**BoIL-32 beta (SEQ ID NO:21)**

CGGATTCCGGGATGCTCAGCTGGAGCTCTGGCTGCAGGATCTCAGGTCCCTCGGGAGGACCTAACGCC
ACCATGTGCTTCGCTAAGGGAGTCCCATAATGACCAGGCTCTGAGGTCCATAATGCACAAACGGGTGG
ATGATTCTGTGATAAAGATGGAAATGAACCAGAAGAAGCACAGATGGAGGCAGCCCTAGATGAGACGGA
GGAGGGACTCAGCGAGGACATCTGTGAATTCAAGAGATCACATTCAAGAGAACCTTCCGAATCCCTG
CAGGAGTCCAGTCCCTGCTTCAGGAAGCACGGCAAGGGATACGCCAGAACATCCAGAGAACCTTCAGTCT
CTGCCCGTCTGGAGGTCCAGAAATCCGGAAAGAGAGACATCTGGGCCAGAGCCCTGGGAGGTTCCAAGTAAT
TCTGCAGAGTCTCCAGCAGCGGTGTTGGGATGCGCTCACCTGGCTGCGGGAGAACGGCGGTGACCTCCTG
GAGGCCATCTGCAGTGTGGTGAAGGCCGTCTGGGAGTGCTGACGGATTCTGCTCCTCTGTGGGCAGC
TCTCGGAAACCTCATCCAGGTCTAGGAGCCGAGGTCTGGAGGAACCTCCTCATCTAGGAGGC
CCTGCACCATCCCCCTCCAGAAACCATCTGTGAAGCGACCTTGCACTCCTGCTCACCCCTGACCCAT
CCTTAACTGCCCTCACCTCCTGT

C**BoIL-32 gamma (SEQ ID NO:22)**

MCFTKRDPRVLASFRVLMVRSSFPRIAGVREAWVLLGEAENILAHLGPSREKNRDSFTQVHLCSQHNLVD
EFFDTMENEPEGAQMEAVLAETKEFKFIKDAFKVMDNHIQENSPETLKESPLLQEARGEVRCRIQRRSVS
TSLEVQNPEESIWARALRQFLGILQSFLSGCRDALTLWEKAACLQAIICSAVEALWEVLTDFCSFVGQL
LCRSЛИQV

D**BoIL-32 gamma (SEQ ID NO:23)**

CGGGATCTCAGCTGGAGCTCTGGCTGCAGGATCTCAGGTCCAGCGGAGGCCAACATGTGC
TTCACTAAGAGAGACCCACGTGCTCTGGCTTCTTCAGGGTTAATGGTAAGAAGCTCATTCCACGTA
TAGCTGGGTTCTGGGAGGCCTGGTTCTGCTGGGTGAAGCTGAGAACATTCTGGCCACTGGGACCCAG
CAGGGAGAACCGAGATTCTTACTCAAGTCATCTGTTCACAGCACAAACCTTGTAGATGAATT
TTCGATAACATGGAAAATGAACCAGAAGGAGCACAGATGGAGGCAGTCCTAGCAGAGACTAAGGAGAAAT
TCATCAAGGACGCCTTAAAGTCATGGATAATCACATTCAAGAGAACAGTCCGAAACCTGAAGGAGTC
CAGTCCCTGCTTCAGGAAGCACGGCAAGAACAGTACGCTGCAGAACATCCAGAGACGCTCCGTCTCCACCTCT
CTGGAGGTCCAGAACATCCGGAAAGAGAGCATCTGGGCCAGAGCCCTGCGGCAGTTCTGGGCATTCTGCAGA
GTTCTGTCGGGTGTCGGATGCGCTCACCTGGCTGTGGAGAACGGCCGCGCCTGCTACAGCCAT
CTGCAGTGCCTGGAGGGCCCTGGGAAGTGCTCACGGATTCTGCTCCTTGTGGCAGCTCTATGC
AGAACGCTCATCCAGGTCTAACAGACCTCACATGGTTCTGGAGGAGCCCCACCTCATTCAAGAACGCTGT
ACGATGCCCTCCCGAAACCATCTGTGAAGCGACCTTACCCCTGCTCACCCCTGACCCATCCTT
AACTGCCCTCCCTCCTGTCTGT

Fig. 13

A**OvIL-32 alpha (SEQ ID NO:24)**

MCFARGVPHDQASLRMLHTWVDHVCDKMGNEPEEAQMEEAALAEELSVDVCESWKITFKRTFPNPCR
SPVPCFRKRSKKYAAESRDPQSLPVWRTRNRKRASGPEPCGGSEVFCVSGSGVAMY

B**OvIL-32 alpha (SEQ ID NO:25)**

CTGCGGTACCGTCCGGATTCCCGGGCAGACAGTGCTCAGCTGGAGCTCTGGCTGCAGGATCTCAGATC
CCAGCCGGAGGACCCTAACATCCACCATGTGCTCGTAGGGGAGTCCCACATGACCAGGCTTCTGAGGA
GCATGCTGCACACCTGGGTGGATCATGTCTGTGATAAGATGGAAATGAACCAGAAGAACAGATGGA
GGCAGCCCTAGCAGAGATGGAGGAGGAACTCAGCAAGGATGTCTGTGAATCATGGAAGATCACATTCAAG
AGAACCTTCCCAGATCCCTGCAGGGAGTCCAGTCCTGCTCAGGAAGCGCAGCAAGAAGTACGCCGAG
AATCCAGAGACCCCTCAGTCTCTGCCTGTCTGGAGGACCAGAAACCGGAAGAGAGCATCTGGCCAGAGCC
CTGCGGCGGTTCCGAGGTTCTGCGGAGTCTCTGGCAGCGGTGTCGATGTACTGACCTGGCTGCAGG
AGAAGGCGGGCCTGCCTGGAGGCCGTCAGTCGGTAAGACCATCTGGGAGTGTGACGGATT
CTGCTCCTCTGTGGGCAGCTCTCAGAAACCTCATCCAGGTCTAGGAGCCCCAGGTGTTCTGAGGAA
CTGCTCCTCATCTAGAAGGCCCTGCACAATCCCCTCCAGAAACCATCTTCTGAAGCGACCTTACCC
CCTGTTCACCTTCACCAATCCTTAAC TGCCCTCACCTCTGTCTGCAGGGACGACACCACATCAA
GCCAGGTTCCCTCTCCAAGTCTGACCCGCTGTCAGGGA

C**SwIL-32 alpha (SEQ ID NO:26)**

MRGVSATRTLKPAGPQRSGLGLPLPDRVPEPPPIPAESSPLLNEVRQGVRSRVRRPPGHNQPHYALAVR
EPRQSTFRRILELFEEMLKRLQQRWRGALAWVQERAAACFRGLCRALEAFWSLVQSFCSMGHAFGSVIQ
V

D**SwIL-32 alpha (SEQ ID NO:27)**

ATGACTTGGAGGGAACTGAGCGGCCAGGCCAGCCCCCTGGGAAAAGTCCTGGGTCTGTGGGCTGTTG
GCAGGAAAGCAGCCTGTCTCAAGGGGGCATGAGGGGGTGTCTGCCACCAGGACTCTCCAAAGGCA
GGGCCTCAGCCAAGGTCAAGGACTGGGCTGCCCTCCCCAGGCAGGTCCGTTCTAGAGTCCGAAGGCCTCTGGCCA
CAGAATCCAGTCCTCTGCTCAACGAAGTCCGGCAGGGAGTCCGTTCTAGAGTCCGAAGGCCTCTGGCCA
CAACCAGCCACATTATGCGCTAGCGGTCCGGAGCCAGGCAGAGCACTTCAGACGCATCCTTGAGCTG
TTGAGGAAATGCTGAAGCGCTGCAGCAGAGGTGGAGGGTGCCTGGCTGGGTGCAGGAAAGGGCTG
CTGCCTGCTCCGGGCTTGTGCAGGGCCCTGAGGCTTCTGGAGCCTGGTGCAGAGTTTGCTCCTC
CATGGGCACGCCTCGGGAGTGTCAAGGTCTAAGGTGCTCCAGGTGAAATAAGAGTTCTAGAGCA
CAACCTCCCCCTGCCTTGGCTAAAAGGCAGCTGTAAGCCTT

Fig. 14

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.